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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,455	07/18/2006	Nobuyoshi Nambu	4991-0112PUS1	4706
2292 7590 03/01/2010 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER NGUYEN, HAIDUNG D				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
03/01/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

### Office Action Summary

**Application No.**

10/586,455

**Applicant(s)**

NAMBU ET AL.

**Examiner**

Haidung D. Nguyen

**Art Unit**

1796

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-16, 18 and 20-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-16, 18, 20-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This action is responsive to applicant's amendment/remarks filed 11/4/09.
2. Claims 14-16, 18, 20-30 are currently pending.

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 14-16, 18, 20-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobkin et al. (6,555,600) in view of Lozano et al. (6,033,599) and Cha et al (5,156,769).

Regarding claims 14-16, 18, 20-22, 24 and 30, Sobkin et al. discloses a volatile corrosion inhibitor to be blended into a molding material having a thermoplastic resin as a principal base material (abstract, ln 7-10) and comprising: a nitrous acid metal salt having a melting point not less than a softening temperature of the thermoplastic resin (sodium nitrite, abstract, ln 14); a benzoic acid salt (cyclohexylammonium benzoate - abstract, ln 14); a saturated polycarboxylic acid or a metal salt thereof (sodium sebacate - abstract, ln 15); and an anticorrosive component for nonferrous metals (benzotriazole, abstract, ln 15).

Sobkin et al. does not disclose the benzoic acid salt is selected from a group consisting of an alkali metal salt and an alkaline earth metal salt of benzoic acid, nor does Sobkin et al. disclose the anticorrosive component for non-ferrous metals is at least one selected from a group consisting alkali metal salts, alkaline earth metal salts, and zinc salts of methylbenzotriazol; 2- mercaptobenzothiazole, 2-

benzothiazolylthioacetic acid, 3-2- benzothiazolylthiopropionic acid, 2,4,6-trimercapto-s-triazine, 2-dibutylamino-4,6- dimercapto-s-triazine, and alkali metal salts, alkaline earth metal salts, and zinc salts thereof.

However, Lozano et al. also discloses a volatile corrosion inhibitor composition to be blended into a thermoplastic resin as a principal base material includes alkali metal salt or alkaline earth metal salt of benzoic acid (abstract, ln 1-4) as a vapor corrosion inhibitor that is effective at high temperature and is non-toxic (col 2, lines 20-23).

Cha et al discloses corrosion inhibitor compositions comprising tolyltriazole (methylbenzotriazol), benzotriazole and salts thereof, specifically sodium and potassium salts (col 3, ln 5-10) useful for inhibiting the corrosion of copper and copper alloy metals (abstract, ln 1-2).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the applicant's invention was made to use the alkali metal salt or alkaline earth metal salt of benzoic acid that is effective at high temperature and is non-toxic (col 2, lines 20-23) as taught by Lozano et al. and tolyltriazole, benzotriazole and their salts that useful for inhibiting the corrosion of copper and copper alloy metals (abstract, ln 1-2) as taught by Cha et al, in the volatile corrosion inhibitor of Sobkin et al., in order to provide corrosion protection against iron, metals containing iron, copper and metals containing copper for long term use and storage of molded articles.

Regarding claim 23, Lozano et al. discloses the thermoplastic resin includes polyethylene or polypropylene (column 4, lines 29-30).

Regarding claims 25-29, both Sobkin et al. and Lozano et al. disclose a volatile anticorrosive film or sheet and the method for using of the a volatile anticorrosive film or sheet for protection of metallic articles in storage and shipping (Sobkin et al. column 14, lines 1-63, examples and Lozano et al. column 1, lines 10-36).

### ***Response to Arguments***

3. Applicant's arguments filed 11/4/09 have been fully considered but they are not persuasive.

Applicant argues that Cha '769 fails to disclose or suggest the use of a metal salt of methylbenzotriazol, or the use of any of the other alternative anticorrosive components such as 2-mercaptobenzothiazole, 2-benzothiazolylthioacetic acid, 3-2-benzothiazolylthiopropionic acid, 2,4,6-trimercapto-s-triazine, 2-dibutylamino-4,6-dimercapto-s-triazine, and alkali metal salts, alkaline earth metal salts, and zinc salts thereof, employed in the claimed invention. However, it is noted that Cha '769 clearly discloses the use of a metal salt of methylbenzotriazol (sodium or potassium salt of tolyltriazole, col 3, ln 7-9, wherein tolyltriazole is another name of methylbenzotriazol).

Applicant further argues that all of Sobkin '600, Lozano '599 and Cha '769 fail to recognize the unexpected, advantageous properties exhibited by the present invention as evidenced by the disclosed comparative test results. However, Sobkin '600 teaches a volatile corrosion inhibitor comprising sodium nitrite, sodium sebacate (abstract, ln 1-3, 12-14), Lozano discloses a corrosion inhibitor composition comprising alkali metal nitrite or alkaline earth metal nitrite, alkali metal benzoate or alkaline earth metal

benzoate (abstract, In 1-4) and as mentioned above, Cha '769 clearly discloses the corrosion inhibitor using a metal salt of methylbenzotriazol (col 3, In 7-9) as claimed by the present invention. Since the combined references teach the same compositions as claimed by the present invention, thus the composition of the combined references would exhibit the same properties as claimed compositions. See *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655, (Fed. Cir. 1990). MPEP 2112.01, II.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

### ***Examiner Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haidung D. Nguyen whose telephone number is (571)270-5455. The examiner can normally be reached on M-Th: 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harold Y Pyon/  
Supervisory Patent Examiner, Art  
Unit 1796

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